

## PATENT COOPERATION TREATY

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From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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PCT

WRITTEN OPINION  
(PCT Rule 66)

ATY RESP W.O.: Nov 16/2004 DR

Date of mailing  
(day/month/year) 16.08.2004

Applicant's or agent's file reference 758.1468WOUI ✓		<b>REPLY DUE</b>	<b>within 3 month(s)</b> from the above date of mailing
International application No. PCT/US 03/35394	International filing date (day/month/year) 05.11.2003	Priority date (day/month/year) 06.11.2002	
International Patent Classification (IPC) or both national classification and IPC B01D27/10			
Applicant DONALDSON COMPANY, INC. et al.			

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I  Basis of the opinion
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

3. The applicant is hereby **invited to reply** to this opinion.

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also:** For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 06.03.2005

Name and mailing address of the International preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Sembritzki, T  Formalities officer (incl. extension of time limits) Fuerbass, C Telephone No. +49 89 2399-8132	
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**I. Basis of the opinion**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

**Description, Pages**

1-24 as originally filed

**Claims, Numbers**

1-13 received on 04.06.2004 with letter of 04.06.2004

**Drawings, Sheets**

1/18-18/18 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

5.  This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

**see separate sheet**

6. Additional observations, if necessary:

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	1-7, 11-16, 18-21 : no
Inventive step (IS)	Claims	8-10, 17 : no
Industrial applicability (IA)	Claims	1-21 : yes

**2. Citations and explanations****see separate sheet**

Reference is made to the following documents:

- D1: US-A-6 051 144 (MCPHERSON W ROGER ET AL) 18 April 2000 (2000-04-18)  
D2: US-A-5 378 254 (MALY EDWARD C ET AL) 3 January 1995 (1995-01-03)  
D3: US-A-4 721 563 (ROSAEN BORJE O) 26 January 1988 (1988-01-26)

**Item I:**

1. As can be understood from the letter dated 04.06.04 new claim 1 should be based on original claim 8. However, this claim would have required a reflector made of glass or plastic (see original claim 8). Furthermore, original claim 8 was dependent on claim 7 which was dependent on claim 5 which was dependent on claim 3 - taking only the information of original claim 8 out of the context of the other dependent claims 3, 5 and 7 clearly introduces information which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT.
2. In addition, the applicant has deleted the following features in claim 1:
  - a communication/sensor circuit completion unit
  - the sensor circuit completion unit being configured to complete a selected signal circuit only when the filter cartridge is properly mounted for useThese features are presented as essential in the disclosure of the invention and indispensable as such for the function of the invention in the light of the technical problem which it seeks to solve. The deletion of these features requires modification of other features to compensate for this deletion. In effect, the deletion of these features introduces subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT.
3. In the context of point 2 above it is questionable whether a mere "optic signal directed into the reflector outwardly from the filter cartridge" is originally disclosed. For the function of the system, i.e. for the purpose which was originally disclosed it is required that the reflected signal is directed to a receiver in order to determine whether a cartridge is installed.
4. In summary, the set of claims filed with letter of 04.06.04 is not admissible. The following examination was therefore carried out based on the original claims as if the above amendments would not have been filed. However, with regard to the

presence of a reflector which directs an optical signal to a receiver the attention of the applicants is explicitly drawn to the disclosure of D1, column 21, lines 3-23.

**Item V:**

**1. Novelty and inventive step**

- 1.1 Document D1, which is considered to represent the closest prior art, discloses a cartridge filter comprising a filter head and a threadably mountable bowl wherein the filter media extends within the cartridge between an open first end cap and a second closed end cap (see D1, Fig. 1 and 2). The filter is designed for the use with a liquid and comprises sensor means for detecting whether a cartridge is installed or not (see D1, column 4, lines 3-53). Accordingly, the subject-matter of independent claims 1, 11 and 14 is not novel (Article 33(2) PCT), the same applies to dependent claims 2 and 6.
- 1.2 D1 further discloses the use of a transmitter comprising an optical reflector which reflects a signal, transmitted from a corresponding transmitter on the base back to a suitable receiver on the base (see D1, column 21, lines 3-23). Thus, the subject-matter of independent claim 21 and dependent claims 3-5, 7, 12, 13, 15, 16 and 18-20 is also not novel (Article 33(2) PCT).
- 1.3 The subject-matter of the other dependent claims seems to contain only features which are either known from the prior art and which a skilled person could easily combine without any inventive skill, or which are the result of a normal design procedure followed by a skilled person (Article 33(3) PCT):

A flexible rib for enabling a contact between a filter and a housing in order to provide an electrical signal when a filter is installed is for example known from D2 (see D2, Fig. 6). A spring-loaded contact for the same purpose is for example known from D3 (see D3, Fig. 8). Since these two features have already been employed for the same purpose in a similar device, it would be obvious to the person skilled in the art, to apply these features with well known effect to a filter according to document D1, thereby arriving at the subject-matter of claims 10 and 17.

- 1.4 Independent claims 11 and 14 comprise all the features of claim 1 and are therefore not appropriately formulated as claims dependent from the latter.
- 1.5 The independent claims are not formulated in the two-part form according to Rule 6.3(b) PCT.
- 1.6 The wording "...is/are incorporated by reference.." (see pages, 1, 2 6 and 7) should be removed (Rule 9(1iv) PCT).

**2. Industrial application**

The industrial applicability is obvious.

**3. Remarks**

The applicant is requested to file new claims which take account of the above comments. The applicant should also indicate in the letter of reply the difference of the subject-matter of the new claims vis-à-vis the state of the art and the significance thereof. The description should be made in conformity with the claims as required by Rule 5.1(a)(iii) PCT.

The applicant is requested to file amendments by way of replacement pages in the manner stipulated by Rule 66.8(a) PCT. In particular, fair copies of the amendments should be filed preferably in triplicate. Moreover, the applicant's attention is drawn to the fact that, as a consequence of Rule 66.8(a) PCT the examiner is not permitted to carry out any amendments under the PCT procedure, however minor these may be.

In order to facilitate the examination of the conformity of the amended application with the requirements of Article 34(2)(b) PCT, the applicant is requested to clearly identify the amendments carried out, no matter whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based (see also Rule 66.8(a) PCT).

If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

**WRITTEN OPINION  
SEPARATE SHEET**

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International application No. PCT/US03/35394

Any information the applicant may wish to submit concerning the subject-matter of the invention, for example further details of its advantages or of the problem it solves, and for which there is no basis in the application as filed, should be confined to the letter of reply rather than be incorporated into the application, Article 34(2)(b) PCT.